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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------|-------------|----------------------|---------------------|------------------|
| 10/648,465 | 08/25/2003 | Bruno Senn | IVd10US | 5100 |
| 7590 | | 02/08/2006 | EXAMINER | |
| John C. Thompson | | MANAHAN, TODD E | | |
| 69 Grayton Road | | ART UNIT | | |
| Tonawanda, NY 14150 | | PAPER NUMBER | | |
| | | 3732 | | |
| DATE MAILED: 02/08/2006 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/648,465

Applicant(s)

SENN ET AL.

Examiner

Todd E. Manahan

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3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 5-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-9 and 12-19 is/are rejected.
- 7) ☒ Claim(s) 10 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the embodiment containing a fan having a rotational axis at a right angle to the optical axis and an additional plurality of fans arranged along one of the optical axis of the light source and along the longitudinal axis of the handle, as per amended claim 19, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the embodiment containing a fan having a rotational axis at a right angle to the optical axis and an additional plurality of fans arranged along one of the optical axis of the light source and along the longitudinal axis of the handle, as per amended claim 19, must be disclosed in the specification. Such embodiment would thus include at least three fans. No new matter may be added.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Nath (United States Patent No. 4,149,086).

Nath discloses a UV irradiation device comprising a housing 14 which forms a hand grip; a light source (note: light source includes bulb 1, reflector 3, and filter 4) mounted within the housing and which emits polymerizing radiation along an optical axis (the optical axis being defined by light guide 7); and an axial fan 11 mounted within the housing for creating an air flow which moves along a path generally transverse to the optical axis of the light source. The axial fan has a rotational axis which is at a right angle to the optical axis (see figure 1).

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 5-9, 12-14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lienhard (United States Patent No. 3,712,984) in view of Gill et al. (United States Patent Publication No. 2004/0185413).

Lienhard discloses the invention essentially as claimed except for the fan being disposed in an external housing instead of in the handpiece housing with the light source. Gill et al. disclose that it is known in the art to provide a light curing gun with a fan disposed within the handpiece housing in order to dissipate heat while the device is being used by the dentist. It would have been obvious to one skilled in the art to dispose the fan in the housing of the light gun of Lienhard with the light source with in view of Gill et al. in order to dissipate heat from the light source during use by the dentist. Regarding claims 7-14, it would have been further obvious provide a heat sink having cooling ribs adjacent the fan and the light source, also as shown by Gill et al., in order to provide more efficient dissipation of heat. To make such heat sink cylindrical would have been an obvious matter of design choice to one skilled in the art. Regarding claim 19, to provide two fans would have been obvious to one skilled in the art, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

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Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lienhard in view of Gill et al. as applied to claim 1 above, and further in view of Grabner (United States Patent No. 3,418,452).

Grabner discloses it is known in the art to provide a housing containing a fan with a removable part 28 that includes the air intake openings. It would have been obvious to one skilled in the art to provide the device of the combination Lienhard as modified by Gil et al. with a removable part that includes the air intake openings in view of Grabner in order to permit access to the fan for cleaning and/or repair.

Allowable Subject Matter

Claims 10 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1, 3, 5-9, 12-19 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Gill et al. implicitly suggests that by placing the fan inside the housing with

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the light source rather than in a separate housing, the fan will provide cooling of the light source at all times, particularly when it is being used.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Todd E. Manahan whose telephone number is 571 272- 4713.

The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on 571 273-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Todd E. Manahan
Primary Examiner
Art Unit 3732

T.E. Manahan
3 February 2006

A handwritten signature in black ink, appearing to read 'T.E. Manahan', with a long horizontal line extending to the right.